No. 200000311

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

World Wide Wheat, L.L.C.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, DURUM

'Platinum'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twelfth day of September, in the year two thousand one.

Attest:

Paul M. Zambarski

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Ann M. Veneman

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
World Wide Wheat, L.L.C.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
D9430

3. VARIETY NAME
Platinum

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
2850 South 36th Street
Suite A-9
Phoenix, Arizona 85034

5. TELEPHONE *(Include area code)*
602/470-1345

6. FAX *(Include area code)*
602/470-1685

FOR OFFICIAL USE ONLY
PVPO NUMBER 200000311

FILING DATE
July 27, 2000

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Limited Liability Company

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Arizona

9. DATE OF INCORPORATION
July 31, 1996

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Rex K. Thompson
2850 South 36th Street
Suite A-9
Phoenix, Arizona 85034

Sheldon E. Richardson
2850 South 36th Street
Suite A-9
Phoenix, Arizona 85034

FEES RECEIVED
FILING AND EXAMINATION FEES: $ 2450.00
DATE 07/27/2000
CERTIFICATION FEE: $ 320.00
DATE 8/17/01

11. TELEPHONE *(Include area code)*
602/470-1345

12. FAX *(Include area code)*
602/470-1685

13. E_MAIL
worldwheat@uswest.net

14. CROP KIND *(Common Name)*
Durum

15. GENUS AND SPECIES NAME OF CROP
Triticum turgidum L. variety durum

16. FAMILY NAME *(Botanical)*
Gramineae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)
- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ YES ☐ NO

21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER	SIGNATURE OF OWNER
Sheldon E. Richardson	Rex K. Thompson
NAME *(Please print or type)* Sheldon E. Richardson	NAME *(Please print or type)* Rex K. Thompson
CAPACITY OR TITLE Chairman/CEO	DATE 5/8/2000
CAPACITY OR TITLE Plant Breeder	DATE 2/17/2000

2000031

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,450 ($300 filing fee and $2,150 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center–East, Beltsville, MD 20705. Telephone: (301) 504-8089.

S&T-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete.

THE ARIZONA AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF ARIZONA
TUCSON, ARIZONA

NOTICE OF RELEASE OF AZ-MSFRS-86
QUALITY ENHANCED SEMI-DWARF DURUM WHEAT GERMPLASM

The Arizona Experiment Station announces the annual release of updated and current male sterile facilitated recurrent selection (MSFRS) quality enhanced semi-dwarf durum wheat germplasm (Triticum turgidum L. var. durum). This genetically diverse population is suggested as a source of high yielding cultivars with superior pasta making qualities

A genetic male sterile was obtained by chemical mutation treatment of seeds from the durum cultivar "1000 D". In the 1982 crossing year a broad diversified array of CIMMYT, Northern U.S., Canadian, and Italian durums and descendants of their hybridization (products of conventional pedigree and population breeding, 1975 to 1981) were utilized at the Mesa Agricultural Center in hand pollination of a segregating male sterile population obtained from Western Plant Breeders. University of Arizona MSFRS durum breeding was initiated with 700 controlled crosses on selected male sterile plants.

The breeding system consists of each year selecting large numbers of male fertile and genetically male sterile plants for adaptability, stiff-short straw, spike size, seed size and number, and freedom from yellow berry, tillering expression, freedom from disease, and a number of other genotypically and physiologically desirable characters for quality and yield. Crosses are made between selected plants using male steriles as female parents and between opposites in plant character combinations to maintain genetic diversity. The F_1 generation is grown at Bozeman, Montana each summer. The F_2 generation is grown in Arizona each winter, (since 1984 at the Maricopa Agricultural Center). It is planted at a very low seeding rate for Arizona adaptation, selection, and crossing. Cooperation of Peavey Company in 1982 and ConAgra in 1983-86 has been beneficial in identifying lines with superior semolina color, protein, and gluten strength. High yielding genotypes with superior quality characteristics are topcrossed back into the population for recombination of genes, as rapidly as selections with quality can be classified for yield.

AZ-MSFRS-86 quality enhanced semi-dwarf durum wheat germplasm is available for exploitation, particularly in the Southwest U.S. and similar irrigated environments. Population quantities of seed may be obtained from R. K. Thompson, Maricopa Agricultural Center, Rt 2 Box 751-F, Maricopa, Arizona 85239. Subsequent and updated germplasm will be available from the Plant Sciences Department of the College of Agriculture, University of Arizona, Tucson, Arizona and D. A. Smith, Jr., Curator, National Small Grains Collection, Grain Collections Building 046, Beltsville Agricultural Center-West, Beltsville, Maryland 20705. It is requested that appropriate recognition of source be

Exhibit A
Origin and Breeding History

'Platinum' (D9430) was derived from a F_2 head selection made in World Wide Wheat,L.L.C.'s (W^3) 1989 male sterile facilitated recurrent selection (MSFRS) quality durum population. In the F_3 a "best plant" head selection was made at Mt. Vernon, Washington. Spikes from the F9 generation were collected in 1995 and increased in 1996 at Maricopa, Arizona to form the basic improved breeder seed. Seed was quarantined under Karnal Bunt protocol small quantities of seed were grown at Moses Lake, Washington and Ronan, Montana in 1997 out of the quarantine area. Platinum was accepted for Certification by the Arizona Crop Improvement Association and two acres was increased for Foundation seed at Maricopa, Arizona in 1998. Again, spores were found and seed was sent to the feed lot. In 1999 seed from Montana 1997 was utilized to produce Foundation seed out of Karnal Bunt quarantine area in Arizona, at Marana and Eloy and Buttonwillow, California. Platinum is licensed to Dunn Seed Company of Yuma, Arizona May 8, 2000 and 139 acres are planted at Yuma and Eloy, Arizona for commercialization in year 2000 by Dunn Seed Company.

As Platinum was developed from a MSFRS genetic recessive male sterile population and dominant black awns from the population background have been a factor commonly associated with outcrosses from unidentified male sterile plants, male sterile and/or black awns off types occur in new varieties. A very few 1 in 1,000 were rogued from the advanced generation breeder strip in Ronan, Montana. Genetic male steriles and/or black awns are expected in the year 2000 at the rate of less than 1 in 1,000. Platinum is genetically stable in both performance and quality with no known variants. To reduce or eliminate off type occurrence head rows are being grown in 2000 for Foundation seed production in 2001.

Selection criteria utilized in development and exploitation of the "Desert Durum" population described in the attached supplements to Exhibit A and in the selection of Platinum were: (1) The segregating generations 2, 3 and 4 were short stiff straw suited to high input production under full irrigation, tillering expression, long and broad spikes as expressed by multiple seeds per rachis node, large seeds relatively free from black point and yellow berry and in the case of Platinum, white chaff and awns which have repeatedly been associated with identity preserved Desert Durum Varieties and the best of pasta products. (2) In generations 5, 6 and beyond, grain yield, semolina and pasta color, protein percent and gluten strength have determined the final selection for Plant Variety Protection.

Germplasm Source Information for:

Supplement to Exhibit A

Platinum (D9430)

The Durum cultivar, "Platinum" (D9430) was selected from a broad base, diverse population, a modification and continuance of Arizona Male Sterile Facilitated Recurrent Selection, 1986 (AZ-MSFRS-86) Quality Enhanced Semidwarf Durum Wheat Germplasm Population, released by the University of Arizona.

This Durum population was developed over a period of six, 2-generation cycles (6 years and 12 generations) by MSFRS population breeding and originated from a broad and diversified array of CIMMYT, Northern US, Canadian and Italian Durum's and descendents of their hybridization assembled in 8 years of conventional pedigree and population breeding. Up to 1000 controlled crosses were made in each spring F_2 generation grown in Southern Arizona with high input, irrigation and nitrogen fertilizer. Approximately 50% were sibs and 50% were top crosses. The F_1 was increased in Montana or Idaho each summer. As this population was being developed for the irrigated Southwest Desert, short stiff straw, large seed size and many tillers with long, but broad and compact heads were selection criteria. Cultivars and lines used for top crosses were selected for yield and semolina quality characteristics. In the early cycles, among established cultivars most often repeated for yield top crossing were "Yavaros 79", "Mexicali 75" and "Westbred Turbo". Among the established cultivars most often used for semolina quality top crosses were "Vic", "Wakoona", "Wascona", "Cando", "Edmore", "Leeds", "Lloyd", "Monroe" and "Westbred 881".

Subsequently in addition to the above top cross sources after repeated selection and recombination, lines with superior yield and excellent semolina quality of gluten strength, protein and color were selected from within the population such as "Durex" and "Reva" for quality and "Duraking" for yield.

The source germplasm for the original male sterile gene was chemically mutated "1000D". Subsequently a chemically mutated male sterile gene from "Mexicali 75" has been incorporated into the population. A copy of the University of Arizona Experiment Station Notice of Release is attached.

Platinum is uniform and stable with no known variants. Observations of stability and uniformity have been made for five years, 1996-2000, and confirm original conclusion in 1995 that Platinum is a very short and stable "Desert Durum". Quality and yield data have been consistent and/or improved each year.

Exhibit B
Novelty Statement

Platinum most closely resembles the variety Duraking, except for the following differences:

1. Platinum glume shoulders are wide and rounded, whereas Duraking glume shoulders are narrow and apiculate.

2. Platinum replaces Duraking as possibly the shortest of the Desert Durum's. Platinum maturity heights are 33.4 to 36.3 inches vs 36.4 to 37.0 inches for Duraking an average difference of 4.3 cm. Although shorter, Platinum is more easily lodged than Duraking.

3. Spikes of Platinum are dense and fat, with typically 6 seeds per rachis node and 2.5 cm shorter than Duraking which is middense, with typically 4 seeds per rachis node and 10 cm long.

4. At maturity spikes of Platinum incline at a 40° angle, while spikes of Duraking are more erect at a 10° angle.

5. Seeds of Platinum are smaller weight 47.1 grams per 1,000 kernels and have a very large germ and angular cheeks. Seeds of Duraking weigh 50.6 grams per 1,000 kernels, have a mid-sized germ and rounded cheeks.

6. Quality features of Platinum are superior to Duraking in many areas as follows: (Data also presented in Table 9a from 3 location year sources)

1. Grain Protein **13.4** vs 12.8
2. Flour Yield **75.4** vs 73.8
3. Semolina Yield **64.2** vs 63.3
4. Flour Protein **12.6** vs 11.4
5. Alveograph W value **230** vs 169
6. Alveograph P/L **1.2** vs 1.9
7. Wet Gluten % **38.1** vs 31.5
8. Dry Gluten % **14.8** vs 11.8
9. Color b value **26.8** vs 23.1
10. Color (COR) **9.7** vs 8.0
11. Pasta Firmness **7.1** vs 6.5

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(*Wheat*)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

2000031 1

NAME OF APPLICANT(S)
World Wide Wheat, L.L.C.

ADDRESS (*Street and No. or R.F.D. No., City, State, and Zip Code*)
2850 South 36th Street
Suite A-9
Phoenix, Arizona 85034

FOR OFFICIAL USE ONLY

PVPO NUMBER

VARIETY NAME
Platinum

TEMPORARY OR EXPERIMENTAL DESIGNATION
D9430

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [ ][ ] or [ ]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[2] 1=Common 2=Durum 3=Club 4=Other (SPECIFY)_____

2. VERNALIZATION:

[1] 1=Spring 2=Winter 3=Other (SPECIFY)_____

3. COLEOPTILE ANTHOCYANIN:

[1] 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

[3] 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

[2] 1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

[1] 1 = Erect 2 = Recurved

[1] 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

[ ][1] Number of Days Earlier Than RIA *

[ ][3] Number of Days Later Than Westbred 881 *

8. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

[ ][0] cm Taller Than ~~Duraking~~ *

[ ][5] cm Shorter Than ~~Reva. 2 cm shorter than~~ Duraking 7 cm shorter than 'Reva' MAH 7-3-01

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

20000311

10. STEM:

A. ANTHOCYANIN
[1] 1= Absent 2=Present

B. WAXY BLOOM
[2] 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)
[2] 1=Absent 2=Present

D. INTERNODE (SPECIFY NUMBER) 4
[1] 1=Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE
[2] 1=Absent 2=Present

[33] cm Length

11. HEAD (at Maturity):

A. DENSITY
[3] 1=Lax 2=Middense 3= Dense

B. SHAPE
[2] 1 = Tapering 2= Strap 3 = Clavate 4 = Other (SPECIFY)_____

C. CURVATURE
[2] 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS
[4] 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR
[1] 1 = White 2 = Tan 3 = Other (SPECIFY)_____

B. SHOULDER
[3] 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK
[3] 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH
[3] 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH
[3] 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE
[3] 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK
[2] 1=Rounded 2=Angular

C. BRUSH
[2] 1=Short 2=Medium 3=Long

[1] 1 = Not Collared 2 = Collared

D. CREASE
[2] 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[1] 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

13. **SEED:** (continued)

E. **COLOR**

[2] 1 = White 2 = Amber 3 = Red 4 = Other (SPECIFY) _____

F. **TEXTURE**

[1] 1=Hard 2=Soft

G. **PHENOL REACTION** *(see instructions)*:

[1] 1 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black 0=No Reaction

14. **DISEASE:** (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

Stem Rust *(Puccinia graminis* f. sp. *tritici)*
[3] field reaction

Stripe Rust *(Puccinia striiformis)*
[2] field resistance

Tan Spot *(Pyrenophora tritici-repentis)*
[0]

Halo Spot *(Selenophoma donacis)*
[0]

Septoria nodorum **(Glume Blotch)**
[0]

Septoria avenae **(Speckled Leaf Disease)**
[0]

Septoria tritici **(Speckled Leaf Blotch)**
[0]

Scab *(Fusarium* spp.)
[0]

"Black Point" (Kernel Smudge)
[0]

Barley Yellow Dwarf Virus (BYDV)
[0]

Soilborne Mosaic Virus (SBMV)
[0]

Wheat Yellow (Spindle Streak) Mosaic Virus
[0]

Wheat Streak Mosaic Virus (WSMV)
[0]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Leaf Rust *(Puccinia recondita* f. sp. *tritici)*
[3] field reaction

Loose Smut *(Ustilago tritici)*
[0]

Flag Smut *(Urocystis agropyri)*
[0]

Common Bunt *(Tilletia tritici* or *T. laevis)*
[0]

Dwarf Bunt *(Tilletia controversa)*
[0]

Karnal Bunt *(Tilletia indica)*
[0]

Powdery Mildew *(Erysiphe graminis* f. sp. *tritici)*
[3] field reaction

"Snow Molds"
[0]

Common Root Rot *(Fusarium, Cochliobolus* and *Bipolaris* spp.)
[0]

Rhizoctonia Root Rot *(Rhizoctonia solani)*
[0]

Black Chaff *(Xanthomonas campestris* pv. *translucens)*
[0]

Bacterial Leaf Blight *(Pseudomonas syringae* pv. *syringae)*
[0]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

15. **INSECT:** (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

Hessian Fly ***(Mayetiola destructor)***
[0] _____

Stem Sawfly ***(Cephus* spp.)**
[0] _____

Cereal Leaf Beetle ***(Oulema melanopa)***
[0] _____

Russian Aphid ***(Diuraphis noxia)***
[0] _____

Greenbug ***(Schizaphis graminum)***
[0] _____

Aphids
[0] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

16. **ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:**

Exhibit D
Additional Description

Platinum is a short semidwarf, spring durum with excellent semolina quality. Characteristics of color, protein content, gluten content and strength and cooking stability. Platinum is to be marketed as an identity preserved "Desert Durum"

Platinum has been tested and is adapted to optimum fertility and irrigated production in Arizona and California. Yields and test weights are very similar to the high yielding Duraking. Maturity is the same. Juvenile growth is erect and relatively non-pigmented. Flag leaf is erect and not twisted at the boot stage of growth. Glumes are wide, long and glabrous, have rounded shoulders. Acuminate beaks are 2 – 3 mm in length. Spikes are long fat and white and with long white awns. Arizona is relatively free of most diseases, thus a comprehensive view of disease reaction is not available. Platinum is resistant to stripe rust and has exhibited moderate field resistance or tolerance to septoria, powdery mildew and leaf and stem rusts.

Application for Variety Certification

Table 1 a-b.

PLATINUM grain yield comparisons in pounds per acre

Average grain yield for 9 location years
World Wide Wheat,L.L.C. and the University of Arizona Cooperative Testing 1996 – 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Globe	Crown
7303	6954	7272	7091	6408	6877	7119	7273

Average grain yield for 5 location years
Taken from the University of California Davis Agronomy Progress reports 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Globe	Crown
7122	6534	7235	7248	5686	7568	6822	7152

Table 2 a-b.

PLATINUM grain test weight comparisons in pounds per bushel

Average test weight for 8 location years
World Wide Wheat,L.L.C. and the University of Arizona Cooperative Testing 1996 – 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Globe	Crown
64.4	64.1	64.8	64.4	64.1	63.9	63.6	62.2

Average test weight for 5 location years
Taken from the University of California Davis Agronomy Progress reports 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Globe	Crown
63.2	62.9	63.7	63.3	62.1	64.3	62.8	61.6

Application for Variety Certification

Table 3 a-b.

PLATINUM seed weight comparisons as grams per 1,000 kernels.

Average seed weight for 6 location years
World Wide Wheat,L.L.C. and the University of Arizona Cooperative Testing 1996 – 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Crown	Globe
46.6	53.0	51.5	48.6	56.4	53.3	53.6	56.6

Average seed weight for 3 location years
Taken from the University of California Davis Agronomy Progress reports 1999.

PLATINUM	Reva	Duraking	RIA	Westbred 881	Topper	Kronas	Crown
48.0	49.8	48.9	43.6	56.7	43.0	57.0	50.2

Table 4 a-b.

PLATINUM average plant height at maturity comparisons in inches

Average plant height for 8 location years
World Wide Wheat,L.L.C. and the University of Arizona Cooperative Testing 1996 – 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Globe	Crown
36.3	38.3	37.0	39.3	39.5	39.0	38.7	40.5

Average plant height for 5 location years
Taken from the University of California Davis Agronomy Progress reports 1999.

PLATINUM	Reva	Duraking	RIA	Westbred 881	Topper	Kronas	Crown
33.4	37.0	36.4	37.6	38.2	40.4	36.8	40.2

Application for Variety Certification

Table 5 a-b.

PLATINUM lodging at maturity comparisons

Average percent lodged for 7 location years
World Wide Wheat,L.L.C. and the University of Arizona Cooperative Testing 1996 – 1999.

PLATINUM	Reva	Duraking	RIA	Durex	Bravadur	Globe	Crown
12.0	8.1	1.6	9.3	0.0	1.0	1.7	2.1

Average lodge rating (1=0.0 to 3.0%, 8=96 to 100%) for 3 location years
Taken from the University of California Davis Agronomy Progress reports 1999.

PLATINUM	Reva	Duraking	RIA	Westbred 881	Topper	Kronas	Crown
1.3	1.6	1.5	1.8	1.7	1.2	3.1	1.1

Table 6 a.

PLATINUM maturity (50% headed) comparisons, days after March 1st

Combined Arizona and California data from 7 location years

PLATINUM	Reva	Duraking	RIA	Westbred 881	Topper	Kronas	Crown
30	29	30	31	28	34	26	30

Table 7 a

PLATINUM % grain protein comparisons

Combined Arizona and California data from 7 location years

PLATINUM	Duraking	Reva	RIA	Durex	Bravadur	Globe	Crown
13.4	13.0	14.4	13.6	14.3	14.1	13.8	14.0

Application for Variety Certification

Table 8 a

Original PLATINUM quality screening comparisons for Protein and Gluten Strength

			Quality Checks				
	D9430 PLATINUM	DURAKING	DUREX	WESTBRED 881	REVA	D3117 CROWN	BRAVADUR
Protein % as is moisture base (Approx. 8.0%)							
1992 – 94	14.3	13.8	15.0	15.2	14.8	15.6	16.0
1995	12.0	12.0	13.2	--	17.8	14.1	13.1
1997	14.0	13.5	14.4	--	--	14.8	14.1
1999	17.1	17.0	17.6	17.9	19.0	17.0	18.3
SDS – Sedimentation							
1992 – 94	10.2	7.0	10.6	9.6	9.7	9.6	10.0
1995	7.4	6.2	8.0	--	9.4	8.0	8.0
1997	7.2	6.8	8.8	--	--	8.0	7.6
1999	7.4	7.6	9.4	8.8	8.2	8.2	7.8

Application for Variety Certification

Table 9 a

Comparative quality data for PLATINUM for 3 location years

Grain	PLATINUM	Duraking	[1] Reva	Ria	Crown	Deluxe	D2656	Topper D1128
Protein % (12%m)	13.4	12.8	14.2	13.5	14.3	13.2	13.2	13.2
Ash %	1.7	1.7	1.8	1.7	1.6	1.6	1.7	1.6
Test Weight (lbs/bu)	62.9	64.1	62.9	63.5	61.7	63.8	64.0	64.2
1,000 Kernel wt.	48.1	50.4	52.2	48.7	49.3	51.2	49.3	45.7
Milling								
Total Flour %	75.4	73.8	73.7	76.6	76.4	75.6	75.6	72.4
Semolina %	64.2	63.3	63.0	64.7	63.9	65.3	63.9	63.5
Semolina								
Protein %	12.6	11.4	13.3	12.6	13.3	13.0	12.1	12.1
Ash %	.81	.67	.80	.78	.75	.74	.74	.72
Speck	.23	.16	.19	.30	.20	.11	.23	.19
Alveograph – W	230	169	185	208	170	171	142	153
Alveograph – P/L	1.2	1.9	1.1	1.5	1.1	1.6	.93	1.2
Wet Gluten %	38.1	31.5	41.5	35.2	41.9	39.0	37.5	36.0
Dry Gluten %	14.8	11.8	18.6	13.9	16.2	14.7	14.3	14.2
Color (b value)	26.8	23.1	25.1	26.3	26.1	21.1	23.4	22.9
Pasta								
Color (COR)	9.7	8.0	8.9	9.2	9.8	7.5	9.0	8.3
Cooked wt (g)	30.2	30.3	29.9	30.0	29.7	30.0	29.6	30.4
Cooked loss %	6.9	7.0	6.7	7.0	6.5	7.6	6.5	6.6
Firmness (gcm)	7.1	6.5	7.8	7.2	8.1	7.0	7.6	6.9

[1] The Reva check data was taken from the 1994 production year

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
World Wide Wheat, L.L.C.	D9430	Platinum

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
2850 South 36th Street Suite A-9 Phoenix, Arizona 85034	602/470-1345	602/470-1685

7. PVPO NUMBER 200000311

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? [X] YES [ ] NO
If no, give name of country

10. Is the applicant the original owner? [X] YES [ ] NO *If no, please answer one of the following:*

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

[ ] YES [ ] NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

[ ] YES [ ] NO If no, give name of country

11. Additional explanation on ownership *(if needed, use reverse for extra space)*:

The variety for which Plant Variety Protection is hereby sought was developed by Rex K. Thompson, an employee of World Wide Wheat, L.L.C. by agreement between employee and World Wide Wheat, L.L.C., all rights to any invention, discovery or development made by the employee while employed by World WIDE Wheat, L.L.C. are assigned to World Wide Wheat, L.L.C. with no ownership rights pertaining to Platinum being retained by the employee. By implied and separate agreement between Rex K. Thompson and World Wide Wheat, L.L.C., part of the royalty income from Platinum is assigned to the employee.

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. **If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.**

2. **If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.**

3. **If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.**

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

STD-470-E (07-97) *(Destroy previous editions).*
Electronic version designed using WordPerfect InForms by USDA-AMS-fMB.

Exhibit E
Statement of Basis of Applicants Ownership

Platinum, the variety for which Plant Variety Protection is hereby sought was developed by Rex K. Thompson, an employee of World Wide Wheat,L.L.C.. By agreement between employees and World Wide Wheat,L.L.C., all rights to any invention, discovery, or development made by the employee while employed by World Wide Wheat,L.L.C. are assigned to World Wide Wheat,L.L.C., with no ownership rights being retained by the employee.

By implied and separate agreement between Rex K. Thompson and World Wide Wheat,L.L.C. part of the royalty income from Platinum is assigned to the employee.